Message

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(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FB1828FB00AF42FFB68B9E0A71626D95-CHARMLEY, WILLIAM]

Sent: 11/30/2016 3:02:37 PM

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Subject: FW: Automotive News on EPA's Impact

WITH NOD TO EPA, TODAY'S CARS ARE FASTER, MORE POWERFUL AND MORE FUN TO DRIVE

November 15, 2016 @ 11:45 am

The EPA, one of the best things that has ever happened to the automobile, looks to be one of the first federal agencies the Trump administration plans to gut.

Last month, candidate Donald Trump <u>pledged</u> to "get rid of the EPA in almost every form." Now that he's won the election, President-elect Trump has softened his stance on many issues. But the EPA remains in danger.

While Trump's plans for the EPA have not yet been made public, the man Trump tapped to lead the EPA transition team, Myron Ebell, doesn't believe that climate change is a man-made phenomenon. The clean air initiatives and fuel economy standards enacted by the U.S. government since 1968 have resulted in faster, cleaner, more fuel-efficient and, yes, more fun-to-drive cars. The auto industry initially struggled with exhaust gas recirculation valves, air pumps, catalytic converters and electronic fuel injection, but by the mid-1980s, horsepower and fuel economy were rising again.

EPA regulations have pushed engineers and designers to find ways to make automobiles more efficient and cleaner.

Let's take a look at power, the one simple measurement that anyone who likes to drive can instantly relate to.

In 1970, Cadillac introduced the biggest displacement engine ever to roll out of Detroit in a regular, modern production vehicle, a 500-cubic-inch (8.2-liter) V-8 rated at 400 hp.

That works out to 48.8 horsepower per liter. If driven gingerly, a Cadillac Eldorado with that huge engine might return 10 miles per gallon.

Today, Mercedes-Benz will sell you an AMG CLA45 sedan powered by 2.0-liter, four-cylinder engine that makes 375 hp, or 187.5 horsepower per liter and has an EPA highway fuel economy rating of 30 mpg.

Ford has a 1.0-liter, three-cylinder gasoline engine for sale in Europe rated at 140 hp; the North American version is rated at 123 hp and delivers 41 mpg highway. Horsepower per liter in the 120 range is now common across the industry.

That's progress. And, yes, that progress has added significant cost to the sticker price of new cars and trucks. But if you think it hasn't been worth it, try taking a deep breath of Shanghai's yellow, sulfurfilled air.

Without the EPA, as well as the California Air Resources Board, pushing automakers to clean up the internal combustion engine, engineers likely would not have perfected such things as turbochargers, direct fuel injection, variable valve timing and dozens of other smaller innovations that have boosted the efficiency of gasoline engines from around 25 percent a couple of decades ago to around 40 percent in some of today's hybrid vehicles.

If Trump reduces or cancels the EPA's aggressive <u>2025 fleet average</u> fuel economy standards and ends the \$7,500 federal incentives for electric vehicles, there likely won't be an immediate effect.

The cost of the technology for vehicles in the production pipeline for 2017 and 2018 has already been paid for. But eventually, as one automotive industry insider told me, "We'll have to take a look at what pays the bills."

James Verrier, CEO of BorgWarner, the giant supplier of turbochargers, transmission parts, gearboxes for electric vehicles other fuel-saving components, told me last week he believes competition between automakers will continue to drive innovation and keep new, fuel-saving technologies coming.

He might be right. Trump can't touch CARB, nor can he influence European and Asian emissions regulations. But I see automakers shifting into neutral on the fuel economy front here unless they are legally required to meet tough standards or by consumer demand from high gasoline prices.

Right now automakers have two giant needs for their limited research and development dollars. The first, tougher fuel economy standards, is not very sexy but is required. The other, developing autonomous vehicles, is viewed by many as pretty cool technology, but isn't mandated.

If the EPA is abolished or fuel economy standards relaxed, you have to think r&d dollars will be redirected away from making vehicles more fuel efficient and to autonomous vehicles.

Trump said he wants American companies to be more competitive. One way he can do that is to appoint an automotive czar with a strong engineering background from the industry -- not a career bureaucrat -- who will work with the European Union, China and rest of the world.

Their mission: Create one global standard for emissions, safety, fuels, autonomous driving and everything else that forces automakers to waste money on duplicate engineering so they can sell versions of the same vehicle in different markets.

All automakers would benefit, of course, from such a move, but full-line automakers, General Motors, Toyota, Ford, Nissan and Fiat Chrysler, would save more money because of the depth and breadth of their product offerings.

Thanks to the EPA and the work it has done under Chris Grundler, director of the Office of Transportation and Air Quality, most sulfur has been removed from gasoline and diesel, cars run cleaner and go further and faster per gallon. Most importantly, we can all breathe a little easier.

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Sent: Thursday, November 17, 2016 12:58 PM

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Subject: Automotive News on EPA's Impact

Automotive News Blog post I mentioned yesterday.

http://www.autonews.com/article/20161115/BLOG06/161119909/1174

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